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4 **IN THE CIRCUIT COURT FOR THE STATE OF OREGON**
5 **FOR THE COUNTY OF BENTON**

6 S. JOSEPH BARRETT, Grandson to
7 FRANCES M. KUCERA, Deceased

8 Plaintiff,

9 vs.

10 GOOD SAMARITAN REGIONAL
11 MEDICAL CENTER, SAMARITAN
12 EVERGREEN HOSPICE, and
13 KATRINA G. HOFFMAN, MSN, FNP
14 Defendants.

CASE NO.

COMPLAINT:

**WRONGFUL DEATH /
MEDICAL MALPRACTICE**

PRAYER FOR RELIEF: N/A

ALLEGATIONS

1.

At all material times herein, plaintiff was a resident of the State of Oregon.

2.

At all material times herein, defendant's, and each of them, were residents of the State of Oregon.

3.

On or around August 14, 2016, Frances M. Kucera (hereinafter "Mrs. Kucera") was found on the ground of her assisted living home, exhibiting symptoms of confusion, lethargy and an inability to operate her personal CPAP machine, prescribed for her Obstructive Sleep Apnea (ICD-10-CM G47.33). Mrs. Kucera was taken by staff and admitted to the Good Samaritan Regional Medical Center.

4.

On August 21, 2016, S. Joseph Barrett, along with his Wife and Mother, visited Mrs. Kucera at Good Samaritan Regional Medical Center. Mrs. Kucera was on Intravenous Oxygen, in a smiling and talkative mood, and exclaimed she was, "excited to go to the wedding", in reference to an upcoming family event she had made plans to attend before the accident; exhibiting signs of working semantic and episodic memory, capable and capacitated cognition.

5.

From August 21, 2016 -September 8, 2016, defendant's Good Samaritan Regional Medical Center, Samaritan Evergreen Hospice and Katrina G. Hoffman, failed to follow the applicable standards of medical care due and owed to Mrs. Kucera in one or more of the following ways:

I. Failing to follow standard point of care assessment and/or adequately achieve suitable baseline vitals;

i. Failure to timely and accurately diagnose and prognose the cause of Mrs. Kucera's failed condition.

- ii. Failure to appropriately and timely treat the cause of Mrs. Kucera's Failed condition.
- iii. Failure to adequately resolve ABG and pH discrepancies contributing to Mrs. Kucera's ASC.
- iv. Failure to ventilate or provide Mrs. Kucera access to oxygen or resuscitative equipment.

II. Failure to bring Mrs. Kucera back from a reversible, pharmacologically induced, reinforced and incapacitated ASC, for the proper provision of informed consent;

- i. Failure to explain the general terms of the procedure or treatment to be undertaken;
- ii. Failure to explain that there may be viable alternative procedures such as;
 - 1. Cognitive Behavioral Therapy for Dyspnea and Symptomatic; Anxiety, Grief, PTSD, Depression (ICD-10-CM Diagnosis codes: RO6.00, F41, F33, F43)
 - 2. Bereavement Counseling and/or Talk Therapy,
 - 3. Oxygen Therapy and NIV Support,
 - 4. Low-flow partial ECCO2R,
 - 5. Conventional ECMO,
 - 6. Endotracheal Intubation,
 - 7. Invasive Surgical Mitral Valve Repair.

III. Failure to abide by Oregon's Death with Dignity Act;

- a. Failure to authorize who may initiate a written request for medication.
- b. Failure to attest that to the best of knowledge and belief Mrs. Kucera is capable, acting voluntarily and is not being coerced to sign the request.
- c. Failure to determine Mrs. Kucera is capable and has made the request voluntarily.
- d. Failure to ensure Mrs. Kucera is making an informed decision.

- e. Failure to explain the potential risks associated with taking the medication to be prescribed.
- f. Failure to refer Mrs. Kucera for potentially suffering from a psychiatric or psychological disorder or depression causing impaired judgment.
- g. Failure to offer the right to rescind the request for medication.
- h. Failure to receive a second oral request no less than fifteen (15) days after making the initial oral request.

IV. Failure to abide by FDA regulations;

- a. “HIGHLIGHTS OF PRESCRIBING INFORMATION, MORPHINE, SULFATE INJECTION, PRESERVATIVE-FREE Solution for Intravenous Use, CII Initial U.S. Approval: 1984, “CONTRAINDICATIONS”; it is contraindicated to prescribe morphine for, “Respiratory depression in the absence of resuscitative equipment”.

6.

At all material times herein, defendant’s Good Samaritan Regional Medical Center and Samaritan Evergreen Hospice are Health Care Facilities located in Linn and Benton Counties, Oregon.

7.

At all material times herein, defendant Katrina G. Hoffman, is employed by Samaritan Evergreen Hospice and provided medical care and treatment to Mrs. Kucera at the Evergreen Hospice in Linn County, Oregon.

8.

On September 8, 2016, at approximately 4:45 PM, Joseph visited Mrs. Kucera at the Samaritan Evergreen Hospice, she was lying on a bed in an empty room in the absence of oxygen/resuscitative equipment. Mrs. Kucera was unresponsive to verbal ques and a pressure applied to her Buccal nerve, caused by methodological morphine accelerated morbidity.

1 9.

2 On September 8, 2016, at approximately 8:25 PM. Katrina G. Hoffman, acting as
3 Attending Physician administered a lethal dose of morphine, without Mrs. Kucera's knowledge
4 or informed consent, unnaturally and unlawfully ending Mrs. Kucera's life.

5 10.

6 Immediate Cause of Death: Type II Respiratory Failure ["ICD-10-CM Diagnosis Code
7 J96.20 - Acute and chronic respiratory failure [AKA Type 2 respiratory failure], unspecified
8 whether with hypoxia or hypercapnia."], Approximate Interval: minutes before Onset to Death,
9 Due to Morphine Toxicity; induced analgesia, hypotension, and bradycardia, Approximate
10 Interval: weeks before Onset to Death. Cause of Death, non-natural: accident, suicide,
11 homicide or could not be determined. (15)

12 11.

13 On September 12, 2016, Katrina G. Hoffman electronically signed the Certificate
14 of Death (Exhibit 1). Citing; "the Immediate Cause of Death: Congestive Heart Failure"
15 ["ICD-10 has no code for "congestive" heart failure."], "Approximate Interval: weeks before
16 Onset to Death, Due to: Right sided ventricular failure" ["ICD-10-CM Diagnosis Code
17 I50.810"], "Approximate Interval: years before Onset to Death, Due to: Pulmonary
18 hypertension, Cause Approximate Interval: years before Onset to Death.", "Other significant
19 conditions contributing to death, Atrial fibrillation, essential hypertension, obesity.", "Manner
20 of Death, Natural."

21 **CAUSES OF ACTION**

22 12.

23 Plaintiff is entitled to recover damages from defendant's jointly and each of them based
24 on the theories of liability hereinafter enumerated in Counts I – IV and under such that other
25 theories of liability as may be appropriate based upon the facts as alleged herein or as revealed
26 during discovery.

27 **COUNT I – NEGLIGENCE PER SE**

28 (Defendant's Good Samaritan Regional Medical Center, Samaritan Evergreen Hospice)

13.

Plaintiff realleges paragraphs 1-11 as though fully set forth herein.

14.

Defendant's Good Samaritan Regional Medical Center and Samaritan Evergreen Hospice owed a duty of care to patients, like Mrs. Kucera, under its care and control.

15.

Defendant's Good Samaritan Regional Medical Center and Samaritan Evergreen Hospice breached such duty when it failed to perform according to the prevailing standards for hospitals while caring for Mrs. Kucera's, in that the health care facilities failed to employ proper procedures for diagnosing and treating Mrs. Kucera.

16.

Defendant's Good Samaritan Regional Medical Center and Samaritan Evergreen Hospice breach of duty was the cause in fact that led to Mrs. Kucera's death.

COUNT II – NEGLIGENCE PER SE

(Defendant Katrina G. Hoffman)

17.

Plaintiff realleges paragraphs 1-11 as though fully set herein.

18.

Defendant Katrina G. Hoffman owed a duty of care to patients, like Mrs. Kucera, under her care and control.

19.

Defendant Katrina G. Hoffman's failure to follow procedure as Attending Physician pursuant to Oregon's Death with Dignity Act was the cause in fact that led to Mrs. Kucera's death.

COUNT III – FORGERY

(Defendant Katrina G. Hoffman)

20.

Plaintiff realleges paragraphs 1-11 as though fully set herein.

1 21.

2 Katrina G. Hoffman committed Forgery when she knowingly signed her name as
3 Attending Physician and Medical Certifier on Mrs. Kucera's Certificate of Death for purposes
4 of injuring and defrauding Mrs. Kucera.

5 **COUNT IV – MEDICAL MALPRACTICE**

6 (Defendant's Good Samaritan Regional Medical Center,
7 Samaritan Evergreen Hospice, and Katrina G. Hoffman)

8 22.

9 Plaintiff realleges paragraphs 1-11 as though full set herein.

10 23.

11 At all times material, defendant's Good Samaritan Regional Medical Center Samaritan
12 Evergreen Hospice, and Katrina G. Hoffman knew or should have known of the FDA
13 Contraindicated prescribing and administration of the Schedule 2 Drug, Morphine, for
14 Respiratory depression in the absence of resuscitative equipment.

15 24.

16 At all times material, defendant's Good Samaritan Regional Medical Center and
17 Samaritan Evergreen Hospice and Katrina G. Hoffman knew or should have known of the
18 procedures pursuant to Oregon's Death with Dignity Act and the protection it provides for
19 Oregon's most vulnerable individuals against the financial interests of outside parties.

1
2 25.

3 As a result of the negligence of the defendant's, plaintiff has been forced to incur lost life.

4 WHEREFORE, on each individual claim set forth herein, plaintiff prays for judgment
5 against defendant's, and each of them, as follows:

6 For economic damages in the amount of: n/a (subject to pre-trial amendment)

7 For noneconomic damages in the amount of: n/a (subject to pre-trial amendment)

8 For costs and disbursements incurred herein; and for such other relief as the
9 court deems equitable and just.

10 DATED this ____ day of August, 2019
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26 S. Joseph Barrett, Attorney for Plaintiff

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14 Defendants.
15 .
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CASE NO.

**PLAINTIFF'S FIRST REQUEST FOR
PRODUCTION**

TO: DEFENDANT GOOD SAMARITAN
REGIONAL MEDICAL CENTER

17 **TO: Defendant Good Samaritan Regional Medical Center via service with**
18 **Summons and Complaint**

19 Pursuant to ORCP 36 and ORCP 43, Plaintiff S. Joseph Barrett hereby serves this
20 Request for Production on Defendant Good Samaritan Regional Medical Center. Plaintiff
21 requests that defendant Good Samaritan Regional Medical Center produce for inspection and
22 copying all requested documents on or before 45 days from the date of service to S. Joseph
23 Barrett at PO BOX 1063, Klamath Falls, OR 97601
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INSTRUCTIONS

This request for Production extends beyond documents within Defendant's immediate possession. It includes documents within Defendant's custody or control, or the custody or control of Defendant's agents, attorneys, representatives, employees, heirs, successors, and assigns, regardless of where located. Therefore, this request may require Defendant or Defendant's attorneys to seek and obtain the requested documents. If any previously known document is no longer in Defendant's possession or control, the Defendant must state whether it is: (a) missing or lost, (b) destroyed, (c) transmitted or transferred to others, or (d) otherwise disposed of. Explain the circumstances and provide the date surrounding the loss of possession of the document, including any authorization for its transfer or disposition, if applicable. If any of the proceeding information is unavailable, state the means of obtaining such information. Any documents or responses to the following requests for production that are withheld for any reason, including assertion of any applicable privilege, shall be designated as such, and shall be identified by describing the type of document, the creator of the document, the recipient (if any) of the document, including any individuals or entities to whom copies of the document have been provided, and a description of the nature of the document so as to reveal the information contained therein for purposes of determining whether the asserted privilege is applicable. To the extent that you believe any of the following requests to be objectionable, answer so much of each and each part thereof that is not, in your view, objectionable. This request is a continuing request until the time of trial. Any additional documents within the scope of this request shall be made available for inspection to Plaintiff's attorneys as soon as any such document comes within Defendant's possession, custody, or control.

DEFINITIONS

"And" and "or" shall be construed conjunctively and disjunctively to require the broadest disclosure of documents within the scope of this Request.

"Complaint" means the state court complaint filed by Plaintiff and initiating this legal action in Linn-Benton County Circuit Court, Case No. _____

"Defendant" means Good Samaritan Regional Medical Center.

1 “Document” means written, drawn, recorded, filmed, or graphic matter, however
2 produced, reproduced, or stored, including tangible things, recorded communications of any
3 kind, and electronic information. The term refers to the original unless copies are available in
4 identical form and content, or unless the original is no longer available. The term shall be
5 construed in the broadest sense allowable under the ORCPs and other applicable law.

6 “Plaintiff” means Frances M. Kucera.

7 “Relevant Time Period” means September 8, 2016, through the present, unless otherwise
8 defined in an individual request.

9 “You” and “your” means Defendant and any agents, family members, and/or
10 representatives acting on Defendant’s behalf.

11 **DOCUMENTS REQUESTED**

12 **Request for Production No. 1:** Consulting physician confirmation (ORS 127.820 s.3.02.)
13 Before a patient is qualified under ORS 127.800 to 127.897, a consulting physician shall
14 examine the patient and his or her relevant medical records and confirm, in writing, the
15 attending physician's diagnosis that the patient is suffering from a terminal disease, and verify
16 that the patient is capable, is acting voluntarily and has made an informed decision. [1995 c.3
17 s.3.02]

18 **Response:**

19 **Request for Production No. 2:** Counseling referral. (ORS 127.825 s.3.03.) If in the opinion
20 of the attending physician or the consulting physician a patient may be suffering from a
21 psychiatric or psychological disorder or depression causing impaired judgment, either physician
22 shall refer the patient for counseling. No medication to end a patient's life in a humane and
23 dignified manner shall be prescribed until the person performing the counseling determines that
24 the patient is not suffering from a psychiatric or psychological disorder or depression causing
25 impaired judgment. [1995 c.3 s.3.03; 1999 c.423 s.4]

26 **Response:**

27 **Request for Production No. 3:** Informed Decision (127.830 s.3.04) No person shall receive a
28 prescription for medication to end his or her life in a humane and dignified manner unless he or

1 she has made an informed decision as defined in ORS 127.800 (7). Immediately prior to
2 writing a prescription for medication under ORS 127.800 to 127.897, the attending physician
3 shall verify that the patient is making an informed decision. [1995 c.3 s.3.04]

4 **Response:**

5 **Request for Production No. 4:** Family Notification (ORS 127.835 s.3.05) The attending
6 physician shall recommend that the patient notify the next of kin of his or her request for
7 medication pursuant to ORS 127.800 to 127.897. A patient who declines or is unable to notify
8 next of kin shall not have his or her request denied for that reason. [1995 c.3 s.3.05; 1999 c.423
9 s.6]

10 **Response:**

11 **Request for Production No. 5:** Written and Oral requests (ORS 127.840 s.3.06) In order to
12 receive a prescription for medication to end his or her life in a humane and dignified manner, a
13 qualified patient shall have made an oral request and a written request, and reiterate the oral
14 request to his or her attending physician no less than fifteen (15) days after making the initial
15 oral request. At the time the qualified patient makes his or her second oral request, the
16 attending physician shall offer the patient an opportunity to rescind the request. [1995 c.3
17 s.3.06]

18 **Response:**

19 **Request for Production No. 6:** Right to rescind request (ORS 127.845 s.3.07) A patient may
20 rescind his or her request at any time and in any manner without regard to his or her mental
21 state. No prescription for medication under ORS 127.800 to 127.897 may be written without
22 the attending physician offering the qualified patient an opportunity to rescind the request.
23 [1995 c.3 s.3.07]

24 **Response:**

25 **Request for Production No. 7:** Waiting periods (ORS 127.850 s.3.08.) No less than fifteen
26 (15) days shall elapse between the patient's initial oral request and the writing of a prescription
27 under ORS 127.800 to 127.897. No less than 48 hours shall elapse between the patient's written
28 request and the writing of a prescription under ORS 127.800 to 127.897. [1995 c.3 s.3.08]

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DATED this ____ day of August, 2019.

NATURAL LAWS

Normally, [Carbon dioxide /] CO₂ is eliminated through our lungs with normal respiration.(*). Rapid elevation in arterial carbon dioxide tension produces an uncomfortable respiratory sensation accompanied by a headache in normal subjects (3) “Carbon dioxide is a by-product of food metabolism and in high amounts has toxic effects including: dyspnea, acidosis and altered consciousness.” (1) [also known as. “ASC” or “Altered States of Consciousness”] (22, Figure 4)

“Whenever these [Dyspnea] mechanisms produce an overall respiratory pattern where an increased requirement for ventilation is balanced by an expected increase in respiratory output, no sensation of abnormal breathing occurs. When respiratory output [and/or input] is in some way inappropriate for ventilation requirements, the conscious sensation of this inappropriateness results in the sensation of breathlessness also known as known as dyspnea, refractory dyspnea/breathlessness. (13)

“Prevalence - Dyspnea (shortness of breath) is a common symptom affecting as many as 25% of patients seen in the ambulatory setting.” (13)

[Dyspnea /] Breathlessness, the subjective experience of breathing discomfort-is [a result of elevated co₂ levels, /and/or] a symptom in many pulmonary, cardiovascular, and neuromuscular diseases [Table of vast interrelated accompanying diseases(5)] . It occurs in normals as well during intense emotional states and heavy labor or exercise (4)

Intense emotional states [/psychogenic diseases] include PTSD (8), Depression, Anxiety (*, 14), Panic Attacks, Grieving (13), [amongst an ever-growing spectrum of related Psychogenic diseases and maladaptive response mechanisms] (*)

“They [/ Intense Emotional States] confirm that the response to separation has deep evolutionary roots and some biological impact on systems controlling vital processes of sleeping, circulation, thermoregulation, and immune surveillance.”(13)

“Most important, animal studies provide new conceptual models for approaching an understanding of human bereavement. Examples are given in the section on social relationships as biological regulators and in Chapter 7. In an additional example, a single aspect of grief can

be isolated and studied in terms of its biological substrate, as in the work of Weiss on learned helplessness”(13) “The symptoms of sighing respiration, dyspnea, substernal tightness, palpitation, weakness, and crying suggest that tests should be made of respiratory control and blood gases, autonomic function (particularly in the cardiovascular system), and energy metabolism (including the rapidly responding hormone systems of the pituitary, thyroid, and adrenal glands).”(13)

Symptoms of dyspnea include:

- i. shortness of breath after exertion or due to a medical condition.
- ii. feeling smothered or suffocated as a result of breathing difficulties.
- iii. labored breathing.
- iv. tightness in the chest.
- v. rapid, shallow breathing.
- vi. heart palpitations.
- vii. wheezing.
- viii. Coughing.

“Point of Care testing (POCT) is the term used for bedside tests that are usually performed on critically sick patients in intensive care units, emergency rooms, operating rooms, pre-hospital settings and inside transport ambulances. Delay in laboratory results due to delay in transport and analysis of sample can be critical in the management of pediatric patients. “(18) “Commonly applied tests as POCT in pediatric emergency include bedside dextrose, arterial blood gas [ABG] analysis that help in detecting O₂ and CO₂ disturbances, acid base status, electrolytes and hematocrit.” (18)

In ABG analysis; CO₂ as well as pH are used as common factors when making decisions concerning diagnosis, for their (decrease or increase from baseline normal: pH 7.35 in) levels also suggest ASC (*, 2, 8, 23)

Vital Signs

1. Heart rate (pulse): 60-100 bpm
2. Respiratory rate: 16-20 breaths per minute

3. Blood pressure: 120/80 mm Hg
4. Temperature: 98°F (36.6°C) to 98.6°F (37°C)
5. ABG analysis (necessary for maintaining consciousness)
 - i. pH - 7.35-7.45
 - ii. Co2 35-45
 - iii. Po2 80-100
 - iv. Hco3 22-26
 - v. O2 Sat. 95-100%

(6) Most doctors struggle with arterial blood gas (ABG) interpretation. ABG interpretation is easy, break it down into steps;

1. The first priority for the respiratory system is pH
2. If partial pressure of carbon dioxide (pCO₂) goes down, partial pressure of oxygen (pO₂) should go up

[Elevated pH /] Alkalosis symptoms include: difficulty [refractory] breathing, nausea, numbness, tremors, confusion, stupor and coma (7)

[Reduced pH /] Acidosis Symptoms include: rapid and shallow breathing, shortness of breath, fatigue or drowsiness, becoming tired easily, confusion, headache, lack of appetite, increased heart rate. (11/5)

SUMMARY

(19) Morphine's side effect: slowed breathing (lower than average/natural respiratory rate (RR)) directly affects the magnitude of alveolar ventilation and subsequently it's ratio to blood flow (which is also decreased by morphine in the cerebral and gastrointestinal areas (10)

- i. For each gas exchanging unit, the alveolar and effluent blood partial pressures of oxygen and carbon dioxide (*PO₂* and *PCO₂*) are determined by the ratio of alveolar ventilation to blood flow (*V'_A/Q'*) for each unit.

1. Alveolar ventilation (the volume of gas per minute that participates in gas exchange) to blood flow

- a. AV / BF or ($V'A/Q'$)

1 2. Effective alveolar ventilation = $V'A$

2 a. $V'A=RR \times (V_T - V_D)$, where RR is respiratory rate, or as
3 $V'A=V'E \times (1 - V_D/V_T)$, minute ventilation minus wasted
4 ventilation

5 3. Minute ventilation of $7.5 \text{ L} \cdot \text{min}^{-1}$ and a normal V_D/V_T of 0.3 results
6 in effective alveolar ventilation of $5.25 \text{ L} \cdot \text{min}^{-1}$.

7 4. Chronic lung disease might increase V_D/V_T to ≥ 0.8 ;

8 **CONCLUSION - Primum non nocere.**

9 Declining consciousness and/or cognitive state are expected when patients are near death.
10 The ability to give even the simplest self-report (yes or no) is lost in the near-death phase of
11 terminal illness yet the ability to experience distress may persist and may be overlooked and
12 undertreated or overtreated. (7) In the case of Mrs. Kucera, overtreated.

13 “The additional complexity and challenges of off-label morphine prescription to
14 respiratory patients reinforce the urgent need for further research in this clinical setting. In the
15 interim, when considering morphine for patients with advanced respiratory disease and
16 refractory breathlessness, we should remember, “first, do no harm”. (27)

17 **REFERENCES**

- 18 1. Adrogué HJ, Rashad MN, Gorin AB, Yacoub J, Madias NE (1989). "Assessing acid-base
19 status in circulatory failure. Differences between arterial and central venous blood". N
20 *Engl J Med.* 320 (20): 1312–6. doi:10.1056/NEJM198905183202004. PMID 2535633.
21 2. Allen, Suzanne. “Acidosis: Symptoms, Causes, and Treatment for Blood PH Levels.”
22 Healthline, *Healthline Media*, 6 Oct. 2018,
23 www.healthline.com/health/acidosis#symptoms.
24 3. Bass, John B., and Jr. “Dyspnea.” Clinical Methods: The History, Physical, and
25 Laboratory Examinations. 3rd Edition., *U.S. National Library of Medicine*, 1 Jan. 1990,
26 www.ncbi.nlm.nih.gov/books/NBK357/.

4. Batra, Prerna, et al. "Bedside ABG, Electrolytes, Lactate and Procalcitonin in Emergency Pediatrics." *International Journal of Critical Illness and Injury Science*, Medknow Publications & Media Pvt Ltd, July 2014, www.ncbi.nlm.nih.gov/pmc/articles/
5. Berliner, Dominik, et al. "The Differential Diagnosis of Dyspnea." *Deutsches Arzteblatt International*, Deutscher Arzte Verlag, 9 Dec. 2016, www.ncbi.nlm.nih.gov/pmc/articles/PMC5247680/.
6. Burns, Graham P. "Arterial Blood Gases Made Easy." *Clinical Medicine* (London, England), Royal College of Physicians, Feb. 2014, www.ncbi.nlm.nih.gov/pmc/articles/PMC5873626/.
7. Campbell, M. L., Templin, T., & Walch, J. (2009, October). Patients who are near death are frequently unable to self-report dyspnea. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/19807234>
8. Cherney, April Khan and Kristeen. "Alkalosis: Causes, Types, and Symptoms." *Healthline Media*, 8 Mar. 2019, www.healthline.com/health/alkalosis#symptoms.
9. De Peuter, S., Van Diest, I., Lemaigre, V., Verleden, G., Demedts, M., & Van den Bergh, O. (2004, September). Dyspnea: The role of psychological processes. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/15325745>
10. Dresden, Danielle. "Dyspnea: Causes, Diagnosis, and Treatment." *Medical News Today*, MediLexicon International, 23 July 2018, www.medicalnewstoday.com/articles/314963.php.
11. Dohi, S., Matsumiya, N., & Abe, T. (1983, November). Mechanism of morphine-induced suppression of central nervous system blood flow. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/6689268>
12. Fayyaz, Jazeela. "Hypoventilation Syndromes Treatment & Management: Approach Considerations, Oxygen Therapy, Respiratory Stimulants." Edited by Guy W Soo, *Hypoventilation Syndromes Treatment & Management: Approach Considerations, Oxygen Therapy, Respiratory Stimulants*, 28 Dec. 2018, emedicine.medscape.com/article/304381-treatment.

13. Giardino, Nicholas, et al. "A38. UNDERSTANDING THE PSYCHOSOCIAL AND BEHAVIORAL FACTORS AFFECTING OUTCOMES IN LUNG DISEASE." *ATS Journals*, American Journal of Respiratory and Critical Care Medicine, 2011, www.atsjournals.org/doi/abs/10.1164/ajrccm-conference.2011.183.1_MeetingAbstracts.A1459.
14. Institute of Medicine (US) Committee for the Study of Health Consequences of the Stress of Bereavment. "Toward a Biology of Grieving." Edited by M Osterwise et al., *Bereavement: Reactions, Consequences, and Care.*, U.S. National Library of Medicine, 1 Jan. 1984, www.ncbi.nlm.nih.gov/books/NBK217841/.
15. Mahinda, Tania B, et al. "Morphine-Induced Analgesia, Hypotension, and Bradycardia Are Enhanced in Hypertensive Rats." *Anesthesia and Analgesia*, U.S. National Library of Medicine, June 2004, www.ncbi.nlm.nih.gov/pubmed/15155331.
16. Neuman, Asa, et al. "Dyspnea in Relation to Symptoms of Anxiety and Depression: A Prospective Population Study." *Respiratory Medicine Journal*, Elsevier Inc., Oct. 2006, [www.resmedjournal.com/article/S0954-6111\(06\)00047-3/fulltext](http://www.resmedjournal.com/article/S0954-6111(06)00047-3/fulltext).
17. Norweg, A., & Collins, E. G. (2013, September 25). Evidence for cognitive-behavioral strategies improving dyspnea and related distress in COPD. Retrieved August 16, 2019, from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3791959/>
18. NVSS, Report No. 2. "A Reference Guide for Completing the Death Certificate for Drug Toxicity Deaths." *Vital Statistics Reporting Guidance*, U.S. Department of Health and Human Services • Centers for Disease Control and Prevention • National Center for Health Statistics • National Vital Statistics System, May 2019, www.cdc.gov/nchs/data/nvss/vsrg/vsrg02-508.pdf.
- 19.* Singh, Virendra, et al. "Blood Gas Analysis for Bedside Diagnosis." *National Journal of Maxillofacial Surgery*, Medknow Publications & Media Pvt Ltd, July 2013, www.ncbi.nlm.nih.gov/pmc/articles/PMC3961885/. (***Step by step approach, FIG. 1**)
- 20.* Petersson, Johan, and Robb W. Glenny. "Gas Exchange and Ventilation–Perfusion Relationships in the Lung." European Respiratory Society, European Respiratory Society,

1 Oct. 2014, <https://erj.ersjournals.com/content/44/4/1023.abstract> (* **FIG. 2 & 3,**
Definitions, Formulas)

21. Petersen, S, et al. “The Effect of Increased Classroom Ventilation Rate Indicated by Reduced CO₂ Concentration on the Performance of Schoolwork by Children.” *Indoor Air, U.S. National Library of Medicine*, June 2016, www.ncbi.nlm.nih.gov/pubmed/25866236.
22. Politis, John, et al. “Respiratory Depression Secondary to Morphine Use in a Patient with COPD and Refractory Breathlessness.” *US National Library of Medicine National Institutes of Health, European Respiratory Society*, 1 May 2017, erj.ersjournals.com/content/49/5/1601858.
- 23.* Vaitl, D., Birbaumer, N., Gruzelier, J., Jamieson, G. A., Kotchoubey, B., Kübler, A., . . . Weiss, T. (2005, January). Psychobiology of altered states of consciousness. Retrieved from <https://www.ncbi.nlm.nih.gov/pubmed/15631555> (* **FIG. 4)**
24. Williams AJ (1998). "ABC of oxygen: assessing and interpreting arterial blood gases and acid-base balance". *BMJ*. 317 (7167): 1213–6. doi:10.1136/bmj.317.7167.1213. PMC 1114160. PMID 9794863.
25. Woodruff, David. “6 Easy Steps to ABG Analysis.” YouTube, YouTube, 17 May 2013, www.youtube.com/watch?v=WUf-cPpnrXw.
26. Rosenblatt, R. A., & Catlin, M. (2012, July 10). Opioids for chronic pain: First do no harm. Retrieved from <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3392287>
27. Politis, J., Le, B., & Smallwood, N. (2017, May 01). Respiratory depression secondary to morphine use in a patient with COPD and refractory breathlessness. Retrieved from <https://erj.ersjournals.com/content/49/5/1601858>

FIGURES

FIG. 1

ABG
vitals

H ⁺	Hydrogen ions, inversely proportional to pH	35-45 mmol/L
pH	Acidity/alkalinity	7.35-7.45
paO ₂	Partial pressure of oxygen in arterial blood	80-100 mmHg
SaO ₂	Arterial oxygen saturation	95-100%
paCO ₂	Partial pressure of CO ₂ in arterial blood	35-45 mmHg
HCO ₃ ²⁻	Bicarbonate in blood	22-26 mEq/L
BE	Base excess (amount of excess or insufficient amount of base in blood)	-2 to +2 mmol/L
CO ₂ : Carbon dioxide		

FIG. 2

Vent.

Req's

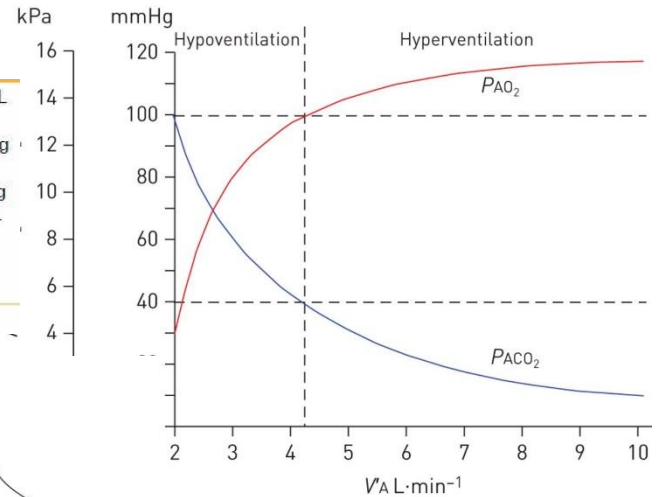
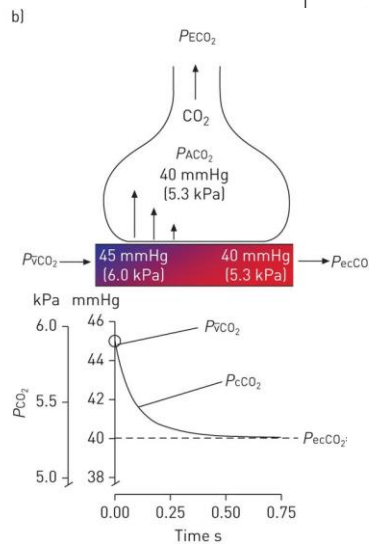
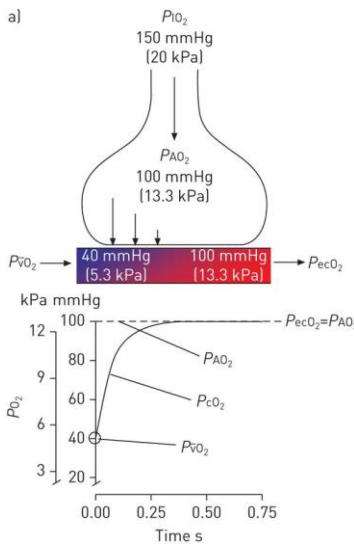


FIG. 3 RR to o2/co2 ratio

FIG. 4 Psychobiology of ASC

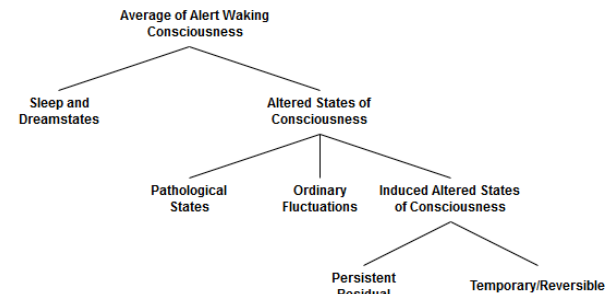
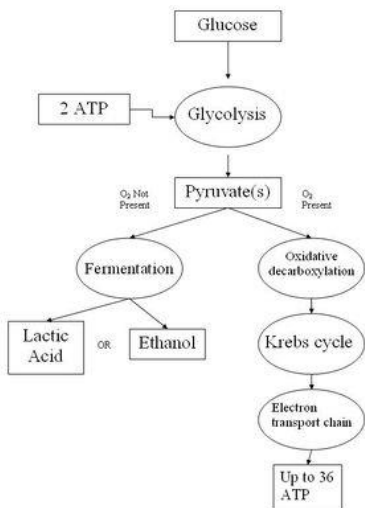


FIG. 5 CELLULAR OXYGEN REQ's

FIG. 6 TYPICAL OXYGEN ALERT CARD



Oxygen alert card

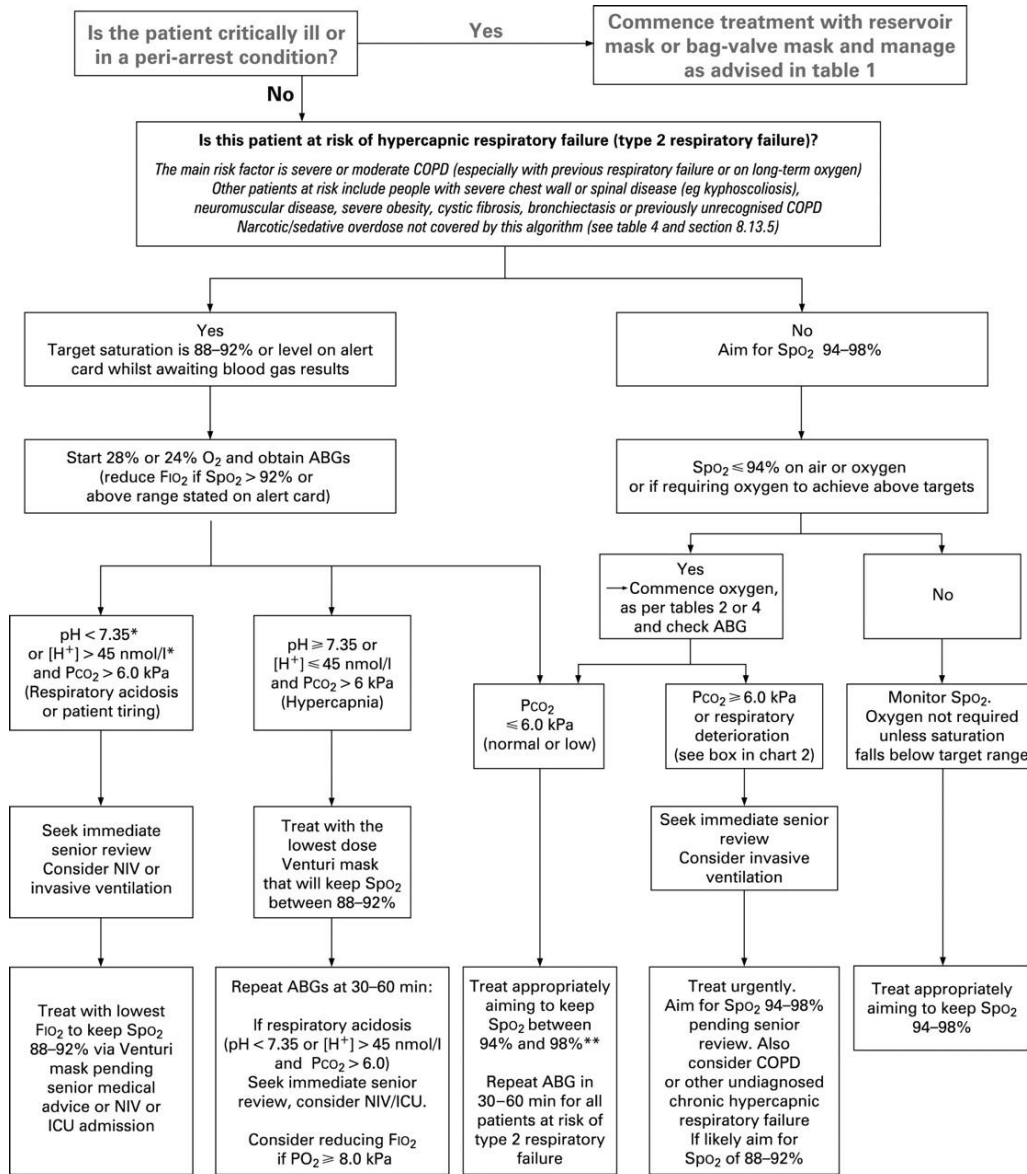
Name: _____

I am at risk of type II respiratory failure with a raised CO₂ level.

Please use my _____ % Venturi mask to achieve an oxygen saturation of _____% to _____% during exacerbations

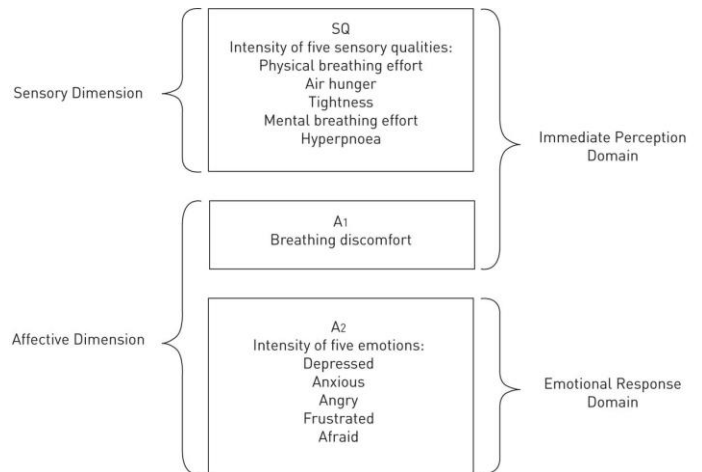
Use compressed air to drive nebulisers (with nasal oxygen at 2 l/min).
If compressed air not available, limit oxygen-driven nebulisers to 6 minutes.

FIG. 7



Any increase in F_{IO₂} must be followed by repeat ABGs in 1 h (or sooner if conscious level deteriorates)
 *If pH is < 7.35 ([H⁺] > 45 nmol/l) with normal or low Pco₂, investigate and treat for metabolic acidosis and keep SpO₂ 94–98%
 **Patients previously requiring NIV or IPPV should have a target range of 88–92%, even if the initial Pco₂ is normal.

FIG. 8 –
Dyspnea
Self-rating
scale



<https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2374383/>

FIG 9. – Mrs. Kucera’s State of Oregon Death Certificate

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STATE OF OREGON
CERTIFICATION OF VITAL RECORD

OREGON HEALTH AUTHORITY
CENTER FOR HEALTH STATISTICS
CERTIFICATE OF DEATH

765233 I.D. TAG NO. 136-2016-023333 STATE FILE NUMBER

Legal Name First Frances Middle Marie Last Kucera Suffix Death Date September 08, 2016

Sex Female Age 81 years Social Security Number 454-52-0482 County of Death Linn

Birthdate June 24, 1935 Birthplace Schulenburg, Texas Was Decedent Ever in U.S. Armed Forces? No

Residence 3833 NW Boxwood Drive City/Town Corvallis

Residence County Benton State or Foreign Country Oregon Zip Code + 4 97330 Inside City Limits? Yes

Marital Status at Time of Death Widowed Spouse's Name Prior to First Marriage David Arnold Kucera

Father's Name Ben Speckels Mother's Name Prior to First Marriage Ruby Wyingger

Informant's Name Colleen Barrett Telephone Number Not Available Relationship to Decedent Daughter Mailing Address 3833 NW Boxwood Drive, Corvallis, OR 97330

Place of Death Hospice Facility Facility Name Samaritan Evergreen Hospice

Location of Death 4600 Evergreen Place City/Town or Location of Death Albany State Oregon Zip Code + 4 97322

Method of Disposition Cremation Place of Disposition Willamette Valley Crematory Location (City/Town and State) Eugene, Oregon

Name and Complete Address of Funeral Facility Musgrove Family Mortuary 225 S Danebo Avenue, Eugene, Oregon 97402

Date of Disposition TBD Funeral Director's Signature Randy C Van Leuven Electronically Signed OR License Number CO-3820

Registrar's Signature Jennifer A. Woodward Date Received September 13, 2016 Local File Number

Amendment

Was case referred to Medical Examiner? No Autopsy? No Were autopsy findings available to complete the cause of death? Time of Death 08:25 PM

CAUSE OF DEATH IMMEDIATE CAUSE a Congestive Heart Failure Approximate Interval: Onset to Death weeks

b Due to (or as a consequence of) Right sided ventricular failure years

c Due to (or as a consequence of) Pulmonary hypertension years

d Due to (or as a consequence of)

Other significant conditions contributing to death Atrial fibrillation, essential hypertension, obesity

Manner of Death Natural If Female Not Applicable Did tobacco use contribute to death? No

Date of Injury Time of Injury Place of Injury Injury at Work?

Location of Injury

Describe how injury occurred If transportation injury, specify

Name and Address of Certifier Katrina G Hoffman 4600 Evergreen Place, Albany, Oregon 97322

Name and Title of Attending Physician If Other than Certifier Date Signed September 12, 2016

Medical Certifier Katrina G Hoffman Electronically Signed Title of Certifier N.P. License Number 201250066NP

Amendment

45-2CC (01/06)

20160919398

I CERTIFY THAT THIS IS A TRUE, FULL AND CORRECT COPY OF THE ORIGINAL CERTIFICATE ON FILE OR THE VITAL RECORD FACTS ON FILE IN THE VITAL RECORDS UNIT OF THE OREGON CENTER FOR HEALTH STATISTICS.

DATE ISSUED: September 21, 2016

JENNIFER A. WOODWARD, PH.D.
STATE REGISTRAR

THIS COPY IS NOT VALID WITHOUT OFFICIAL VITAL RECORD FLAG WATERMARK AND HOLOGRAPHIC SEALS

FIG. 10 – FDA Morphine Sulfate Injection Label

HIGHLIGHTS OF PRESCRIBING INFORMATION

These highlights do not include all the information needed to use MORPHINE SULFATE INJECTION USP safely and effectively. See full prescribing information for MORPHINE SULFATE INJECTION USP.

MORPHINE SULFATE INJECTION USP, PRESERVATIVE-FREE, Solution for Intravenous Use, CII

Initial U.S. Approval: 1984

INDICATIONS AND USAGE

Morphine sulfate is an opioid agonist indicated for the management of pain not responsive to non-narcotic analgesics. (1)

DOSAGE AND ADMINISTRATION

- Direct Intravenous Injection: The usual starting dose in adults is 0.1 mg to 0.2 mg per kg every 4 hours as needed for pain management. The dose should be adjusted according to the severity of pain, the occurrence of adverse events, as well as the patient's underlying disease, age, and size. (2.2, 2.3)

DOSAGE FORMS AND STRENGTHS

- Morphine Sulfate Injection USP, 2 mg/mL, 4 mg/mL, 8 mg/mL, 10 mg/mL, and 15 mg/mL, is available in single-use Carpuject™ and iSecure™ syringes for intravenous administration. (3)

CONTRAINDICATIONS

- Known hypersensitivity or allergy to morphine (4)
- Bronchial asthma or upper airway obstruction (4)
- Respiratory depression in the absence of resuscitative equipment (4)
- Paralytic ileus (4)

WARNINGS AND PRECAUTIONS

- Dosing errors:** Take care when prescribing and administering to avoid dosing errors due to confusion between different concentrations and between mg and mL, which could result in accidental overdose and death. (5.1)
- Cardiovascular instability:** High doses are excitatory, resulting from sympathetic hyperactivity and increase in circulatory catecholamine (5.2)
- Respiratory depression:** Rapid intravenous administration may result in chest wall rigidity (5.3)
- CNS toxicity:** High doses are excitatory, resulting in convulsions (5.4)
- CNS Depressants:** May increase the risk of respiratory depression, hypotension, sedation, coma, or death if use in conjunction with other CNS active drugs (5.6)

- Increased intracranial pressure or head injury: May increase respiratory depressant effects and elevate cerebrospinal fluid pressure (5.7)
- Hypotensive effect: May cause hypotension in ambulatory patients (5.8)
- Gastrointestinal effects: May diminish propulsive peristaltic waves in the gastrointestinal tract and prolong obstruction (5.10)
- Biliary surgery or disorders of biliary tract: May cause spasm of the sphincter of Oddi and diminish biliary and pancreatic secretions (5.11)

ADVERSE REACTIONS

The most serious adverse reaction encountered is respiratory depression, apnea, circulatory depression, respiratory arrest, shock, and cardiac arrest. Other common frequently observed adverse reactions include: sedation, lightheadedness, dizziness, nausea, vomiting, and constipation. (6)

To report SUSPECTED ADVERSE REACTIONS, contact Hospira, Inc. at 1-800-441-4100 or FDA at 1-800-FDA-1088 or www.fda.gov/medwatch.

DRUG INTERACTIONS

- CNS depressants: May increase the risk of respiratory depression (7.1)
- Muscle relaxants: May enhance the neuromuscular blocking action of skeletal muscle relaxants and produce respiratory depression (7.2)
- Mixed agonist/antagonist opioid analgesics: May reduce the analgesic effect and/or may precipitate withdrawal symptoms (7.3)
- Cimetidine: May increase respiratory and CNS depression (7.4)
- Anticholinergics: May increase the risk of urinary retention, severe constipation, or paralytic ileus (7.6)

USE IN SPECIFIC POPULATIONS

- Pregnancy:** Based on animal data, may cause fetal harm. (8.1)
- Pediatric patients:** Safety and effectiveness and the pharmacokinetics of Morphine Sulfate Injection in pediatric patients below the age of 18 have not been established. (8.4)
- Geriatric patients:** Use caution during dose selection, starting at the low end of the dosing range while carefully monitoring for side effects. (8.5)
- Renal and hepatic impairment:** Start patients at lower doses and titrate cautiously (8.7, 8.8)

See 17 for PATIENT COUNSELING INFORMATION.

Revised: 11/2011

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- 5.2 Cardiovascular Instability
- 5.3 Respiratory Depression
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- 5.6 Central Nervous System (CNS) Depressants
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- 5.8 Hypotensive Effect
- 5.9 Driving and Operating Machinery
- 5.10 Gastrointestinal Effects
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- 10.2 Treatment

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12 CLINICAL PHARMACOLOGY

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* Sections or subsections omitted from the full prescribing information are not listed.